

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

---

Imperial Patent Office

Patent Application No.: 222 05

Class 22b, Group 3

---

**BADEN ANILINE- & SODA FACTORY in LUDWIGSHAFEN**

**Process for the Preparation of Condensation Products of the Anthracene Series.**

Addition to the Patent 220579 dated February 20, 1909

**Patented in the German series starting from March 12, 1909.**

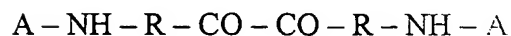
**Period of applicability: February 19, 1924.**

In the patent 220579, a process is described for the preparation of condensation products from halogen ketones of the general type



(wherein R stands for an unsubstituted or a substituted aromatic or aliphatic residue, HI stands for a halogen atom) and amines of the anthracene series

It has now been shown that the halogen diketone of type  $\text{HI} - \text{R} - \text{CO} - \text{R} - \text{HI}$  can also be condensed with amines of the anthraquinone series forming new condensation products, in which the anthraquinone molecule is linked to the diketone molecule through the imide group, as illustrated by the general formula



(in which A stands for an anthraquinone group)

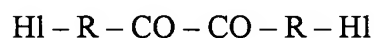
### Example

50 parts of 4,4<sup>1</sup> – dichlorobenzene, 100 parts of 1-aminoanthraquinone, 2 parts of calc. soda, 2 parts of copper oxide and 1500 parts of nitrobenzene are heated till completion of the reaction. After cooling, the precipitated, crystalline, reaction product is filtered, washed and dried with nitrobenzene and alcohol to form fine brown crystalline needles which dissolve sparingly in cold and quickly in hot nitrobenzene giving reddish brown colour. The colour of concentrated sulphuric acid solution is olive, that in 23% oleum is greenish-blue.

One proceeds in the same manner while using other halogen ketones of the type described. In place of 1-aminoanthraquinone, other amino compounds of anthraquinone or its derivatives can also be used, the nitrobenzene can be replaced in the same way by another inert agent. In addition, one can also add cuprous chloride instead of copper oxide to the condensation.

### PATENT – CLAIM

In the process of the Patent 220579, as established, one uses halogen ketone of the general formula



instead of halogen ketone of the formula  $\text{HI} - \text{R} - \text{CO} - \text{R} - \text{HI}$

as required in the main Patent

(in which R stands for an unsubstituted or a substituted aromatic or aliphatic group, HI stands for a halogen atom).